Patent Claims

1. Formable plastics article which inhibits water droplet formation and comprises a plastics substrate, at least one inorganic coating (a) which inhibits water droplet formation, and one adhesion-promoting intermediate layer (b) located between the plastics substrate and the inorganic coating, obtainable by applying the intermediate layer (b) from a mixture with a solvent which has a volatility index smaller than or equal to 20, the total of the layer thicknesses of the inorganic coating (a) and of the intermediate layer (b) being at most 700 nm and
one or more nonionic flow control agents and an anionic flow control agent are added to coating composition (a), the ratio by weight of anionic flow control agent to nonionic flow control agent being in the range from 0.01:1 to 1:1.

2. Plastics article according to Claim 1, characterized in that the solvent has a volatility index smaller than or equal to 15.

3. Plastics article according to Claim 1 or 2, characterized in that the mixture from which the intermediate layer is applied encompasses at least 70% by weight of a solvent which has a volatility index smaller than or equal to 20.

4. Plastics article according to any of the preceding claims, characterized in that the compound having a volatility index smaller than or equal to 20 gives a delta haze of at least 6% after 60 minutes of exposure time and 10 abrasion wheel rotations.

5. Plastics article according to any of the preceding claims, characterized in that the solvent is a carboxylic ester.

6. Plastics article according to any of the preceding claims, characterized in that the plastics substrate encompasses cycloolefin copolymers,

polyethylene terephthalates, polycarbonates, and/or poly(meth)acrylates.

7. Plastics article according to any of the preceding claims, characterized in that the plastics substrate is composed of polymethyl methacrylate.

8. Plastics article according to any of the preceding claims, characterized in that the plastics substrate has an impact strength of at least 10 kJ/m^2 to ISO 179/1.

9. Plastics article according to any of the preceding claims, characterized in that the plastics substrate has a thickness in the range from 1 mm to 200 mm.

10. Plastics article according to one or more of the preceding claims, characterized in that the thickness of the adhesion-promoting intermediate layer (b) is in the range of 50 and 400 nm.

11. Plastics article according to one or more of the preceding claims, characterized in that the adhesion-promoting intermediate layer encompasses vinyl polymers modified by polar groups.

12. Plastics article according to any of the preceding claims, characterized in that the carbon content of the inorganic coating (a) is at most 17% by weight, based on the weight of the coating (a).

13. Plastics article according to any of the preceding claims, characterized in that the inorganic coating (a) is obtainable by curing colloidal solutions of inorganic and/or organometallic compounds.

14. Plastics article according to any of the preceding

claims, characterized in that the inorganic coating (a) is obtainable by condensing a composition which encompasses at least 80% by weight of alkyltrialkoxysilanes and/or tetraalkoxysilanes, based on the content of condensable silanes.

15. Plastics article according to any of the preceding claims, characterized in that the layer thickness of the coatings (a) and (b) is in the range from 100 to 500 nm.

16. Plastics article according to one or more of the preceding claims, characterized in that the scrub resistance of the plastics article to DIN 53778 is at least 10 000 cycles.

17. Plastics article according to any of the preceding claims, characterized in that the plastics article has a modulus of elasticity to ISO 527-2 of at least 1500 MPa.

18. Plastics article according to any of the preceding claims, characterized in that the plastics article has a weathering resistance to DIN 53 387 of at least 5000 hours.

19. Plastics article according to one or more of the preceding claims, characterized in that the plastics article has a transparency to DIN 5033 of at least 70%.

20. Process for producing plastics articles which inhibit water droplet formation, according to one or more of Claims 1 to 19, characterized in that

a) an adhesion-promoting coating (b) is applied to a plastics substrate from a mixture with a compound which has a volatility index smaller than or equal to 20, and is cured, and then

b) an inorganic coating (a) which inhibits formation of water droplets is applied and cured.

21. Process according to Claim 20, characterized in that the coating (b) is applied by flow coating.

22. Process according to Claim 20 or 21, characterized in that the coating (a) is applied by flow coating.